

## **ABSTRACT**

A system and related methods for introducing intra-channel spatial diversity within a multi-carrier wideband communication channel is presented. In accordance with one aspect of the present invention, developed more fully below, a method is presented comprising receiving  
5 information for transmission to a receiver, and generating a plurality of sub-carriers to redundantly transmit the information to a user over a multi-carrier wireless communication channel, wherein each of the sub-carriers is dynamically modified by a set of complex weights to ensure that each of the sub-carriers of the wireless communication channel propagates along a different physical path to the receiver.

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